



## PATENT ABSTRACTS OF JAPAN

(11) Publication number: **04297561 A**(43) Date of publication of application: **21.10.92**

(51) Int. Cl.

**C23C 2/02****C23C 2/40****C23F 4/00**(21) Application number: **03086170**(22) Date of filing: **26.03.91**(71) Applicant: **NISSHIN STEEL CO LTD**(72) Inventor:  
**FUKUI YASUSHI**  
**MIONO TADAAKI**  
**NAKAMOTO KAZUNARI**  
**YOSHII TSUGUYASU****(54) HIGH SPEED HOT-DIPPING METHOD****(57) Abstract:**

**PURPOSE:** To shorten etching treating time and to enable manufacture at high speed at the time of executing plating after activating surface of a steel strip by etching with plasma or ion beam.

**CONSTITUTION:** Before executing plasma-etching 10 or beam-etching on the steel strip 1 in a vacuum chamber 8 connected with hot-dipping bath 11, the steel strip is heated in the same or a continuous vacuum chamber 8. By heating the steel strip 1 under vacuum atmosphere in advance to the etching, vaporizing material existing on surface of the steel strip 1 is removed and the surface layer to be etched, is reduced. In this result, the etching treating time is shortened and also, the plasma-etching device or the ion beam-etching device can be used with small-size and low output one, and the equipment cost can be reduced.

COPYRIGHT: (C)1992,JPO&amp;Japio

